What is claimed is:

1.   1.   A method of manipulating graphical block diagram block parameters in a graphical

2.   block diagram modeling environment, comprising:

3.   receiving a graphical block diagram of blocks for a model developed by a user; and

4.   processing parameters specified for each of the blocks by the user to produce run-

5.   time parameters.

1.   2.   The method of claim 1, wherein the run-time parameters comprise non-interfaced

2.   parameters, and wherein processing comprises:

3.   determining which of the non-interfaced parameters have matching values; and

4.   defining a pooled parameter to represent the non-interfaced parameters having

5.   matching values in references to such non-interfaced parameters.

1.   3.   The method of claim 2, wherein the processing parameters further comprises defining

2.   a structure to enable code generation from the model that includes the pooled parameter.

1.   4.   The method of claim 2, wherein determining comprises:

2.   identifying which of the non-interfaced parameters match a given criterion.

1.   5.   The method of claim 3, wherein the given criterion requires an exact match of values

2.   of the non-interfaced parameters.

1.   6.   The method of claim 4, wherein the given criterion requires an exact match between a

2.   value of one of the non-interfaced parameters and a value of at least one other of the non-

3.   interfaced values after a data matching function is applied to the value of the at least one

4.   other of the non-interfaced parameters.

1.   7.   The method of claim 1, wherein the run-time parameters comprise an interfaced

2.   parameter expression and wherein processing further comprises:

3.   creating a structure for the interfaced parameter expression to enable user access to

4.   an interfaced variable in the interfaced parameter expression while the model is being

5   executed.

1   8.   The method of claim 6, wherein creating further comprises defining the structure to

2   enable mapping of the interfaced variable to an executable code generated from the model.

1   9.   The method of claim 1, wherein processing comprises:

2   evaluating the parameters to determine numerical values; and

3   evaluating the parameters to construct a data structure describing any of the

4   parameters that includes an interfaced variable.

1   10.   The method of claim 8, wherein processing comprises:

2   defining each run-time parameter as corresponding to an expression of one or more of

3   the parameters.

1   11.   The method of claim 8, wherein processing comprises:

2   defining one of the run-time parameters as corresponding to one of the parameters.

1   12.   The method of claim 10, wherein the parameter comprises an interfaced parameter

2   and wherein defining defines the corresponding run-time parameter as a non-interfaced

3   parameter.

1   13.   The method of claim 10, wherein the parameter is of one data type and wherein

2   defining defines the corresponding run-time parameter as having a different data type.

1   14.   A computer program product residing on a computer-readable medium for

2   manipulating graphical block diagram block parameters in a graphical block diagram

3   modeling environment, the computer program product comprising instructions causing a

4   computer to:

5   receive a graphical block diagram of blocks for a model developed by a user; and

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6 process parameters specified for each of the blocks by the user to produce run-time

7 parameters.

1 15. A computer system comprising:

2 means for receiving a graphical block diagram of blocks for a model developed by a

3 user; and

4 means for processing parameters specified for each of the blocks by the user to

5 produce run-time parameters.